

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

To the Drawings:

Please substitute the attached amended FIG. 1 for the pending FIG. 1. The amended portion is the reference numeral 106 changed from "display's clock control circuit" to "LCD's clock control circuit", and the reference numeral 112 is also changed from "LCD display" to "LCD". Further, the legend "(PRIOR ART)" and "Replacement Sheet" are newly labeled to the drawing.

Please substitute the attached amended FIG. 2 for the pending FIG. 2. The amended FIG. 2 is revised by sequentially adding ΔV_1 or ΔV_6 , ΔV_2 or ΔV_5 , ΔV_3 or ΔV_4 , ΔV_4 or ΔV_3 , ΔV_5 or ΔV_2 , ΔV_6 or ΔV_1 between every two dash lines ending in Voltage axis, and further by adding the legend "(PRIOR ART)" and "Replacement Sheet".

Please substitute the attached amended FIGs. 3a and 3b for the pending FIGs. 3a and 3b. The amended portion is the addition of the legend "(PRIOR ART)" and "Replacement Sheet".

Please substitute the attached amended FIG. 5 for the pending FIG. 5. The amended portion is the reference numeral 602 changed from "clock circuit control" to "clock control circuit", the reference numeral 608 is also changed from "display clock controller" to "LCD clock controller", the second time appeared V_{ref0} is also changed from " V_{ref0} " to " V_{ref5} ", and the reference numeral 612 is also changed from "LCD display" to "LCD". Further, the legend "Replacement Sheet" is newly labeled to the drawing.

Please substitute the attached amended FIG. 6 for the pending FIG. 6. The amended portion lies in that the reference symbol S100 has been changed from "receive a

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

data signal and a group of reference voltage" to "receive a data signal and a group of reference voltages", the reference symbol S106 is also changed from "driving the plurality of data lines responsive to the compensated display signal and the group of reference voltage" to "driving the plurality of data lines responsive to the compensated display signal and the group of reference voltages", and the legend "Replacement Sheet" is further added.

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

REMARKS

Present Status of the Application

The abstract and specification are objected to because the language is not clear and concise. The drawings are objected to because the legend "PRIOR ART" is required to be added in FIGs. 2, 3a and 3b, and FIGs. 2, 5 and 6 should be amended correctly in accordance with the specification. The Office Action objected to the presently-pending claims 1-6. The Office Action rejected all presently-pending claims 1-7. Specifically, the Office Action rejected claims 1-7 under 35 U.S.C. 102(e) as being anticipated by Hashimoto (US 7,046,223, "Hashimoto" hereinafter).

Applicants have amended the language of the abstract and the specification to render it clear and concise. Applicants have amended the drawings with the addition of "PRIOR ART" in FIGs. 2, 3a and 3b, and correctly amended FIGs. 1, 2, 5 and 6 in accordance with the specification. Applicants have amended claims 1-6 to more clearly define the present invention. After entry of the foregoing amendments, claims 1-7 remain pending in the present invention, and reconsideration of those claims is respectfully requested.

Claim Rejections under 35 U.S.C. 102

The Office Action rejected claims 1-7 under 35 U.S.C. 102(e) as being anticipated by Hashimoto. Applicants respectfully traverse the rejections of claims 1-7 because Hashimoto does not teach each and every element recited in these claims.

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

As well defined in the MPEP, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The present invention is in general related to a line inversion drive device for a thin film transistor liquid crystal display as currently amended claim 1, which recites:

A line inversion drive device for a thin film transistor liquid crystal display, comprising:

a data inversion circuit, **embedded in a clock controller**, for receiving a data signal, said data inversion circuit, responsive to an inversion control signal, determining whether to invert said data signal and outputting a display signal. (*Emphasis Added*)

The Examiner construes that the circuits 33, 35 and 37 shown in FIG. 2 of Hashimoto operate in conjunction with the data inversion circuit of the present application as presented in page 10, line 2 of the current Office Action. However, Applicants understand that said assertion is not accurate, because the circuits 33, 35 and 37 are not embedded in the control circuit 50, while the data inversion circuit of the present invention is embedded in the clock controller. As such, Hashimoto fails to disclose, teach or suggest at least the feature. Thus, Hashimoto does not anticipate claim 1, and the rejection should be withdrawn.

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

Furthermore, the Examiner construes "POL" shown in FIG. 2 of Hashimoto refers to the data signal of the present application, "STB" shown in FIG. 2 or "S_H" shown in FIG. 1 of Hashimoto refer to the inversion control signal of the present application. However, in Hashimoto, applicants find out "the polarity signal POL is a signal that inverts in every one horizontal sync period" as recited in column 2, lines 10-11 and "the strobe signal STB is a signal having a same period as that of the horizontal sync signal S_H" as recited in column 1, lines 66 to column 2, line 1. It is deduced from the above comparison that POL is not the data signal and STB is not the inversion control signal. Thus, the data inversion circuit is not to invert data signal and output the display signal according to STB.

In view of the reasons above, currently amended independent claim 1 should be allowed over the prior art of record.

Additionally and notwithstanding the foregoing reasons for the allowability of claim 1, these dependent claims recite further features and/or combinations of features that are patentably distinct from the prior art of record.

For at least the foregoing reasons, currently amended independent claims 2, 4 and 5 have the same features of currently amended claim 1, so that they should be allowed over prior art of record, and then dependent claim 3 is also allowed as a matter of law, because the dependent claim contains all features of its independent claim 2. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

The present invention is in general related to a line inversion drive method for a

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

thin film transistor liquid crystal display to drive a plurality of data lines as currently amended claim 6, which recites:

A line inversion drive method for a thin film transistor liquid crystal display to drive a plurality of data lines, comprising the steps of:

receiving an input signal and a group of reference voltages;
determining whether to **invert said input signal**, responsive to an inversion control signal, **and output a display signal**;
compensating said display signal; and
driving said plurality of data lines responsive to said compensated display signal and said group of reference voltages.

(Emphasis Added)

In accordance with the currently amended claim 6, the input signal is inverted firstly to output the display signal, and then the display signal is compensated. However, in Hashimoto, the display signal is compensated firstly, and then the input signal is inverted to output the display signal. Thus, the operation mode of the present application is different from that of Hashimoto. As such, Hashimoto fails to disclose, teach or suggest at least the feature. Thus, Hashimoto does not anticipate claim 6, and the rejection should be withdrawn. Since independent claim 6 should be allowed over the prior art of record, its dependent claim 7 should also be allowed as a matter of law, because the dependent claim contains all features of its independent claim 6. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Customer No.: 31561
Application No.: 10/708,229
Docket No.: 7804-US-PA

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-7 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date : *June 22, 2017*

Respectfully submitted,

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